

## REMARKS

Reconsideration of this application, as amended, is respectfully requested.

This application has been reviewed in light of the Office Action dated June 1, 2005. Claims 1, 21, and 31-53 are currently pending in this application. As indicated above, Claims 1, 21, 40-46, 48 and 51 have been amended.

In the Office Action, Claims 1, 21, and 31-47 have been rejected under 35 U.S.C. §103(a) as allegedly being unpatentable over *Dahlman et al.* (U.S. 6,339,646) in view of *Burns* (U.S. 6,141,374), and Claims 48-53 have been rejected under 35 U.S.C. §103(a) as allegedly being unpatentable over *Dahlman et al.* (U.S. 6,339,646) in view of *Dahlman et al.* (WO 99/12284). Additionally, the Examiner has rejected Claims 31, 32, 38, 39, 48, and 51 under 35 U.S.C. § 112, first paragraph, and objected to Claims 1, 21, and 40-46. Further, the Examiner has objected to the specification.

With regard to the objection to the specification, the Examiner asserts that on page 16, line 17, the sentence including “the delay 722 delays the I-channel signals output from the adder 744” is incorrect. As indicated above, this sentence has been amended to read “The delay 722 delays the I-channel signals output from the adder 742 744”, which it is respectfully submitted, correctly describes FIG. 7. Accordingly, it is respectfully requested that the objection to the specification be withdrawn.

With regard to the objection to Claims 1, 21, and 40-46, the Examiner asserts that the term “adapted to” makes the claim indefinite, citing MPEP § 2106.02(c). Although there is no section 2106.02(c) of the MPEP, as indicated above, the “adapted to” language from these claims has been removed. Accordingly, it is respectfully requested that this objection to the claims be withdrawn.

With regard to the rejections of Claims 31, 32, 38, 39, 48, and 51 under 35 U.S.C. § 112, first paragraph, the Examiner asserts that these claims fail to comply with the written description requirement. However, even after discussing this rejection with the Examiner

during a telephone interview on August 1, 2005, it is still confusing as to what the Examiner is rejecting. More specifically, with regard to the rejections of Claims 31, 32, 38, and 39, it is respectfully submitted that there is clearly an enabling disclosure of the recitations of Claims 31, 32, 38, and 39, which it appears from the telephone interview the Examiner agrees with. However, during the telephone interview, the Examiner kept referring to page 18, lines 21-23, asserting that this section does not allow Claims 31, 32, 38, and 39 to depend from independent Claims 1 and 21. However, it is here that it is difficult to follow what the Examiner is asserting, as it unclear how the Examiner finds support for recitations of the claims in the specification but still asserts this is not enabling because of another section of the specification. Therefore, it is respectfully submitted that Claims 31, 32, 38, and 39 are clearly supported in the specification (on page 18, line 25 to page 19, line 18), and as such are enabling to one skilled in the art. Accordingly, it is respectfully requested that this rejection of the claims be withdrawn.

With regard to the rejection of Claims 48 and 51, the Examiner asserts that managing of a base station, and the assigning steps in these claims are not described in the disclosure on pages 18-19, and therefore constitute new matter. More specifically, it appears the Examiner is taking issue with the claims being directed to the operations of base stations, which the Examiner asserts is not taught in the specification. With regard to this rejection, claims 48 and 51 relate to the utilization of scrambling codes being assigned to base station, rather than to managing a base station. The specification on page 18, line 25 to page 19, line 18 fully describes how the scrambling codes are used for data transmission, characteristics of the scrambling codes, and relationships between the scrambling codes. More specifically, page 19, lines 5 to 10 of the specification fully describes the utilization of the scrambling codes as recited in Claim 48. Further, it is respectfully submitted that the utilization of scrambling codes should be predefined in both a node of a base station and a user equipment to make communication, which is clearly known to one skilled in the art.

Additionally, as indicated above, Claim 48 has been amended to more clearly define the method, i.e., a method for generating scrambling codes in a mobile communication system.

Further, with regard to Claim 51, Claim 51 has been amended to remove the “managing” language and focus primarily upon the scrambling code assignment, which is the object of the present invention.

With regard to the rejections of independent Claims 1 and 21, which the Examiner rejected under 35 U.S.C. §103(a) as allegedly being unpatentable over *Dahlman* in view of *Burns*, it is respectfully submitted that the Examiner is incorrect. As previously argued, there is no motivation nor would it have been obvious to add the matched filter vectors of *Burns*, i.e., the alleged secondary sequence, with a second m-sequence to produce a secondary scrambling code.

As indicated by the Examiner, in col. 5, lines 3-17 *Dahlman* requires a second scrambling code for supporting a compressed mode and discloses the structure generating the second scrambling code by setting a shift register value. Further, in col. 5, lines 18-27, *Dahlman* discloses a structure for processing a signal by using a channelization code and a scrambling code plus another code, instead of a method for using a second scrambling code. Accordingly, the description disclosed in col. 5, lines 18-27 of *Dahlman* is not related to the present invention, i.e., managing a scrambling code (the relationship between scrambling codes) and a method for assigning a scrambling code. Further, although the description disclosed in col. 5, lines 3-17 of *Dahlman* discloses a concept of a second scrambling code (or a secondary scrambling code), the description of *Dahlman* fails to disclose the subject matter of the present invention of managing a scrambling code, i.e., the relationship between scrambling codes, and a method for assigning a scrambling code.

As indicated by the Examiner, in col. 3 *Burns* discloses a concept of a masking process, but this method for managing a scrambling code is different from the method for managing a scrambling code, i.e., the relationship between scrambling codes, and a method for assigning a scrambling code as recited in the present application. More specifically, col. 3 of *Burns* discloses a method for managing a scrambling code in IS-95 or CDMA 2000. As in col. 3, lines 4-20 of *Burns*, all base stations use an identical PN code (or a scrambling code), but a unique shift offset for each base station is applied to the PN code. Accordingly,

col. 3 of *Burns* generates a local PN code identically used by all base stations, and then performs masking for applying a unique offset to the local PN code for each base station.

However, in the present invention, each base station uses a specific PN code (or a scrambling code), therefore the masking is applied to an m-sequence, not to the generated PN code (scrambling code), which is distinguishable from *Burns*. Further, it is respectfully submitted that *Burns* fails to disclose a method for managing a scrambling code and the relationship between scrambling codes, to which the present invention is directed.

For example, Claim 1 of the present invention discloses "...the masking step shifts the first m-sequence cyclically by L chips to generate an  $L^{\text{th}}$  secondary scrambling code associated with the primary scrambling code", which it is respectfully submitted is patentably distinct from the masking process of *Burns*.

With regard to the rejections of independent Claims 48 and 51, which the Examiner has rejected under 35 U.S.C. §103(a) as allegedly being unpatentable over *Dahlman* (U.S.) in view of *Dahlman* (WO), the Examiner asserts that *Dahlman* (U.S.) teaches all the recitations of these claims, except for assigning to a second base station, which the Examiner asserts is taught in *Dahlman* (WO). It is respectfully submitted that the Examiner is incorrect. More specifically, it is respectfully submitted that *Dahlman* (U.S.) clearly does not teach scrambling code groups having  $((K-1)*M+K)^{\text{th}}$  through  $(K*M+K)^{\text{th}}$  scrambling codes assigned to the first base station and having  $(K*M+K+1)^{\text{th}}$  through  $((K+1)*M+K+1)^{\text{th}}$  scrambling codes assigned to a second base station, wherein M is a total number of secondary scrambling codes per primary scrambling code and K is a natural number, the  $((K-1)*M+K)^{\text{th}}$  and  $(K*M+K+1)^{\text{th}}$  scrambling codes being the primary scrambling code of the first base station and a primary scrambling code of the second base station, respectively, and the  $((K-1)*M+K+1)^{\text{th}}$  through  $((K+1)*M+K+1)^{\text{th}}$  scrambling codes are generated by shifting the first m-sequence by  $((K-1)*M+K)$  through  $((K+1)*M+K)$  chips, respectively, as is recited in both claims. Accordingly, it is respectfully requested that the rejection of Claims 48 and 51 be withdrawn.

In view of the preceding amendments and remarks, it is respectfully submitted that all pending claims, namely, Claims 1, 21, and 31-53, are in condition for allowance. Should the Examiner believe that a telephone conference or personal interview would facilitate resolution of any remaining matters, the Examiner may contact Applicants' attorney at the number given below.

Respectfully submitted,

A handwritten signature in black ink, appearing to read "Paul J. Farrell", written over a horizontal line.

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